Working with Elders in Science

Fidji Gendron, Associate Professor of Biology

Summer Teaching Institute on Indigenizing Teaching
September 3, 2015
Why include Elders?
How to contact them?

• Build a relationship with them

• Resident Elders at the FNUniv
  • Roland Kaye: 790-5950 ext 3129

• Other Elders in the community
Protocol

- Elder Honorarium
  - $200 per day + travel expenses
- Tobacco, tobacco ties, and broad cloth
Outside the Classroom

- Visits to the Medicine Room at the FNUniv

- Contact Student Success Services to book a workshop with an Elder: 790-5950 ext 3001
In the Classroom

• Invite Elders in your classroom
How to Reach Online Students?

- BIOC 200: Medicinal Plants and Culture
- WebEx
In the Classroom

- Videos with Elders about protocols and traditional uses of plants
  - [https://www.youtube.com/user/medicineroom1](https://www.youtube.com/user/medicineroom1)
- Students are asked to complete a collaborative wiki using UR Courses in BIOL 101
In the Classroom

- Videos with Elders and community members about protocols and traditional uses of plants, especially medicinal plants
- Discuss one important teaching you have learned in these videos
The First Nations University of Canada is proud to invite you to the Science Showcase Series. From September until November 2015, the Department of Science, the Environment and Economic Development (DISEED) will be holding a monthly workshop, featuring traditional knowledge in biology, chemistry and the environment. Each 50 min-long session will immerse the inquiring minds of high school-level students in a colourful world of fluorescent molecules and pond life under the microscope.

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Date &amp; Time</th>
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<tbody>
<tr>
<td>Chemistry Light Show</td>
<td>September 22</td>
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<tr>
<td>Fluorescence to Chemiluminescence</td>
<td>9:30 or 10:30 am</td>
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<td>Hide Tanning</td>
<td>October 20</td>
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<td>9:30 or 10:30 am</td>
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<td>Red-Willow Basket</td>
<td>November 24</td>
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<td>9:30 or 10:30 am</td>
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Workshops are free of charge and space is limited.

To attend, please contact:
- Fidji Gendron
  fgendron@fnuniv.ca, 306-790-3950 ext. 3335
- Leanne Stricker
  lstricker@fnuniv.ca, 306-790-3950 ext. 3334
A Traditional Elder’s Anti-Aging Cornucopia of North American Plants

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1.1 INTRODUCTION

Phytotherapy is a common form of medicine for many North American Aboriginal people, and a wide variety of plants are used as food and medicine to maintain health. Plants are a rich source of natural compounds whose various biological activities have provided medicinal value to traditional healers for centuries. About 80% of the world’s population still relies on traditional medicines for their primary health care [1]. Despite their cultural value, only 6% of the plants have been studied for their biological activity [2]. Although some pharmaceutical agents developed in labs are synthetic, many drugs originate from natural products such as those found in fungi, bacteria, animals, protists, and plants. Plant extracts and their derivatives have received considerable attention as therapeutic agents for preventing and treating health problems. Since the 1940s, for example, most molecules involved in cancer treatment have been of natural source, with almost half being either natural products or their transformed products [3]. The promising biological activities of these molecules warrant more research. Newman and Cragg strongly recommend continued exploration of these natural products to find enhance appreciation regarding indigenous science. For example, several plant species used by traditional healers in the boreal regions of Canada have been examined for antioxidant activity and treatment of the symptoms of diabetes [4]. Findings from such studies corroborate the traditional land and plant knowledge of Aboriginal plant gatherers to effectively select plants with specific medicinal value. In the Native culture, traditional foods are seen as sacred and may have spiritual and medicinal value above provision of food energy. Traditional foods are rich in bioactive molecules that may have medicinal value. It is important to recognize that many plants utilized in Native North American culture fall on the continuum of foods and medicines.

Turner points out that a description of traditional plants in the Aboriginal culture is not complete without talking about the tools used to harvest, process, and prepare them (such as digging sticks), their names in different languages, and their connection to the land [5]. This information is conveyed by oral traditions, such as when younger generations spend time on the land with their families, especially the Elders. Unfortunately, the younger generation today spends less time with Elders. There is a need to find new ways to share traditional knowledge with the Aboriginal and non-Aboriginal communities.

PRELIMINARY SCIENTIFIC INVESTIGATION OF THE EFFECTIVENESS OF THE MEDICINAL PLANTS PLANTAGO MAJOR AND Achillea Millefolium AGAINST THE BACTERIA Pseudomonas Aeruginosa AND Staphylococcus Aureus IN PARTNERSHIP WITH INDIGENOUS ELDERS.

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ABSTRACT

This preliminary investigation was undertaken in partnership with Indigenous elders to investigate the antibacterial effectiveness of common Plantain (Plantago major L.) and Yarrow (Achillea millefolium L.) against the skin pathogens Pseudomonas aeruginosa and Staphylococcus aureus.
Questions?